

CLAIMS

1. (Amended) An inverter device comprising:
 - an output-voltage calculating unit that calculates a plurality of output voltage command values in which amplitudes are the same as each other but only phase advances under a fixed condition, based on a frequency command value for driving a motor and a state quantity of the motor, in each calculation period;
 - a PWM-pattern generating unit that is a semiconductor integrated circuit that includes
 - a unit that temporarily stores each of the plurality of output-voltage command values output by the output-voltage calculating unit,
 - a unit that reflects the plurality of output-voltage command values stored, in a triangular wave signal in time-series order, and
 - a unit that outputs a PWM signal based on the result of the reflection; and
 - a switching unit that switches a direct voltage according to the PWM signal output by the PWM-pattern generating unit and supplies an alternating voltage with a predetermined frequency to the induction motor.
2. (Amended) An inverter device comprising:
 - an output-voltage calculating unit that calculates a plurality of output voltage command values when a phase change amount exceeds a predetermined value, and calculates one output-voltage command value when a phase change amount does not exceed the predetermined value, based on a frequency command value for driving a motor and a state quantity of the motor, in each calculation period;
 - a PWM-pattern generating unit that outputs a PWM signal according to an output-voltage command value output

by the output-voltage calculating unit; and
a switching unit that switches a direct voltage
according to the PWM signal output by the PWM-pattern
generating unit and supplies an alternating voltage with a
5 predetermined frequency to the induction motor.

3. (Amended) The inverter device according to claim 1,
wherein

when the plurality of output-voltage command values
10 are to be calculated and if the frequency command value is
greater than a predetermined value,

the output-voltage calculating unit calculates a
larger number of output-voltage command values than a case
of being smaller than the predetermined value.

15
4. (Amended) The inverter device according to claim 1,
wherein

the output-voltage calculating unit calculates the
plurality of output-voltage command values when the
20 frequency command value is greater than a predetermined
value, and calculates one output-voltage command value when
it is smaller than the predetermined value.

5. (Amended) The inverter device according to claim 2,
25 wherein

when the plurality of output-voltage command values
are to be calculated and if the frequency command value is
greater than a predetermined value,
the output-voltage calculating unit calculates a
30 larger number of output-voltage command values than a case
of being smaller than the predetermined value.

6. (Added) The inverter device according to claim 2,

wherein

the output-voltage calculating unit calculates the plurality of output-voltage command values when the frequency command value is greater than a predetermined 5 value, and calculates one output-voltage command value when it is smaller than the predetermined value.